WASHINGTON'S AGRICULTURAL VEGETABLE CHEMICAL USAGE, 2006

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GREEN PEAS, PROCESSING

Results of the 2006 Vegetable Chemical Use Survey are presented in the following tables. The survey was designed to collect data on chemical applications made from the end of the 2005 harvest through completion of the 2006 harvest from a sampling of vegetable growers in Washington. Targeted crops in Washington included asparagus, processing carrots, processing sweet corn, dry onions, processing green peas, and strawberries.

Survey results include estimates of total area treated, number of applications, rates per application and per crop year, and total pounds of chemicals applied. Data are summarized for the active ingredients of pesticides and other chemicals applied. Pesticide data were collected for specific formulations of active ingredients (trade name products) and then converted to active ingredient. Therefore, the estimates associated with a particular active ingredient may represent applications of several trade name products. Pesticide application rates also reflect partial coverage applications as a result of band, spot, and alternate row spraying techniques.

Fertilizer information was not collected on the 2004 Vegetable Chemical Use Survey.
Five states were surveyed for processing green peas in 2004 and 2006: Minnesota, New York, Oregon, Washington, and Wisconsin. Surveyed acreage totaled 190,000 acres and Washington accounted for 18 percent of total surveyed acreage.

Nitrogen was applied to 74 percent of the processed green pea acreage in the Program States in 2006: Minnesota, New York, Oregon, Washington, and Wisconsin. Phosphate, potash, and sulfur application were made on 43, 45, and 21 percent of the acreage, respectively. Herbicides were applied to 92 percent of the surveyed acres. The most common herbicides applied to Program States were **Pendimethalin**, on 61 percent of the acreage; **Imazethapyr**, applied to 47 percent of the acreage; and **Bentazon**, applied to 25 percent of the acreage. Insecticides were applied to 19 percent of the planted acres for processed green peas. **Dimethoate** was applied to 10 percent of the acreage. Fungicides were applied to 3 percent of the acres. The only fungicide with publishable data was **Azoxystrobin**, used on 1 percent of the acreage.

Green Peas, Processing: Fertilizer Use & Percent of Acres Treated by Program States for 2004 & 2006

State	Planted Acreage		Area Receiving 1/							
			Nitrogen		Phosphate		Potash		Sulfur	
	2004	2006	2004	2006	2004	2006	2004	2006	2004	2006
	Acres		Percent							
Minnesota	71,700	86,700	-	71	-	35	-	34	-	4
New York	19,000	19,500	-	90	-	90	-	90	-	21
Oregon	17,700	17,600	-	78	-	22	-	11	-	72
Washington	35,600	34,300	-	60	-	43	-	35	-	39
Wisconsin	38,400	31,900	-	83	-	49	-	80	-	18
TOTAL	**182,400**	**190,000**	**-**	**74**	**-**	**43**	**-**	**45**	**-**	**21**

1/ Refers to acres receiving one or more applications of a specific fertilizer ingredient.
- Fertilizer applications were not collected in the 2004 Vegetable Chemical Use Survey.

Green Peas, Processing: Pesticide Applications, Planted Acreage & Percentage Receiving Applications, Program States & Total, 2004 & 2006

State	Planted Acreage		Area Receiving 1/							
			Herbicide		Insecticide		Fungicide		Other	
	2004	2006	2004	2006	2004	2006	2004	2006	2004	2006
	Acres		Percent							
Minnesota	71,700	86,700	84	96	3	6	**		**	
New York	19,000	19,500	99	99	5		**		**	
Oregon	17,700	17,600	99	100	55	69	**		**	
Washington	35,600	34,300	89	69	46	35	**	**	**	**
Wisconsin	38,400	31,900	84	96	26	20	3	**	**	
TOTAL	**182,400**	**190,000**	**88**	**92**	**21**	**19**	**2**	**3**	******	******

*** Insufficient reports to publish data for pesticide class. 1/ Refers to acres receiving one or more applications of a specific pesticide class.*

Green Peas, Processing: Agricultural Chemical Applications, Washington, 2004 & 2006 1/

Active Ingredient 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2004	2006	2004	2006	2004	2006	2004	2006	2004	2006
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
Bentazon	51	30	1.1	1.1	0.72	0.740	0.80	0.817	14.5	8.5
Clomazone	4	-	1.0	-	0.16	-	0.17	-	0.3	-
Glyphosate iso. salt	16	9	1.1	1.2	0.61	0.547	0.66	0.650	3.7	2.0
Imazethapyr	23	7	1.0	1.0	0.03	0.004	0.03	0.004	0.3	4/
MCPA	33	-	1.0	-	0.28	-	0.29	-	3.4	-
MCPA, dimethyl. salt	8	27	1.1	1.0	0.34	0.388	0.39	0.402	1.1	3.7
Metribuzin	13	7	1.1	1.0	0.11	0.094	0.13	0.095	0.6	0.2
Pendimethalin	-	8	-	1.0	-	0.448	-	0.449	-	1.2
Quizalofop-P-ethyl	17	4	1.1	1.0	0.07	0.072	0.07	0.074	0.4	0.1
Sethoxydim	22	-	1.0	-	0.29	-	0.29	-	2.3	-
Trifluralin	14	11	1.0	1.0	0.51	0.482	0.52	0.482	2.6	1.8
Insecticides										
Dimethoate	30	11	1.0	1.2	0.25	0.221	0.25	0.258	2.8	1.0
Zeta-cypermethrin	18	25	1.1	1.1	0.04	0.028	0.05	0.032	0.3	0.3

1/ Planted acres in 2004 and 2006 for Washington were 35,600 acres and 34,300 acres, respectively.

2/ Insufficient reports to publish data for the following agricultural chemicals: 2004: Herbicides: Dicamba, Dimethenamid-P, Fluroxypyr, Pendimethalin, Triallate. Insecticides: Diazinon, Esfenvalerate, Lambda-cyhalothrin, Petroleum distillate, Phosmet. Fungicides: Sulfur. Other Chemicals: Cytokinins. 2006: Herbicides:2,4-D, dimeth. salt, Clomazone, MCPA, MCPA, sodium salt, MCPB, Metolachlor, Sethoxydim, Triallate. Insecticides: Chlorpyrifos, Malathion, Petroleum distillate. Fungicides: Fludioxonil. Other Chemicals: Gibberellic acid.

3/ Refers to acres receiving one or more applications of a specific agricultural chemical. 4/ Total applied is less than 50 lbs.

Note: Data may not multiply across due to rounding.

Green Peas, Processing: Agricultural Chemical Applications, Program States, 2004 & 2006 1/

Active Ingredient 2/	Area Applied 3/		Applications		Rate Per Application		Rate Per Crop Year		Total Applied	
	2004	2006	2004	2006	2004	2006	2004	2006	2004	2006
	Percent		Number		Pounds Per Acre				1,000 Pounds	
Herbicides										
2,4-D, dimeth. salt	-	2	-	1.0	-	0.421	-	0.431	-	1.6
Bentazon	27	25	1.0	1.0	0.74	0.699	0.77	0.724	38.2	34.2
Clomazone	14	5	1.0	1.0	0.44	0.605	0.44	0.605	10.9	5.6
Glyphosate iso. salt	10	5	1.0	1.4	0.58	0.948	0.60	1.315	10.6	13.6
Imazamox	1	1	1.0	1.1	0.02	0.023	0.02	0.025	0.1	**
Imazethapyr	34	47	1.0	1.0	0.04	0.043	0.04	0.044	2.3	3.9
MCPA	9	-	1.0	-	0.28	-	0.29	-	4.6	-
MCPA, 2-ethylhexyl	-	*	-	1.0	-	0.140	-	0.140	-	0.1
MCPA, dimethyl. salt	2	6	1.1	1.0	0.34	0.340	0.39	0.351	1.1	3.9
MCPA, sodium salt	-	2	-	1.0	-	0.360	-	0.360	-	1.3
MCPB	11	17	1.0	1.0	0.45	0.621	0.45	0.628	9.3	20.6
Metribuzin	3	2	1.1	1.0	0.12	0.097	0.14	0.098	0.7	0.3
Pendimethalin	48	61	1.0	1.0	0.58	0.701	0.60	0.714	52.5	82.9
Quizalofop-P-ethyl	3	2	1.1	1.0	0.07	0.064	0.07	0.064	0.4	0.3
S-Metolachlor	2	3	1.1	1.1	1.09	1.177	1.16	1.247	3.6	6.3
Sethoxydim	8	3	1.0	1.1	0.28	0.288	0.28	0.307	4.0	1.8
Triallate	3	-	1.0	-	1.14	-	1.19	-	6.1	-
Trifluralin	13	7	1.0	1.0	0.47	0.448	0.47	0.448	11.1	5.8
Insecticides										
Bifenthrin	1	3	1.0	1.0	0.03	0.033	0.03	0.033	0.1	0.2
Dimethoate	14	10	1.0	1.2	0.22	0.239	0.23	0.288	5.9	6.1
Esfenvalerate	1	-	1.0	-	0.03	-	0.03	-	0.1	-
Zeta-cypermethrin	6	7	1.1	1.2	0.03	0.025	0.04	0.029	0.4	0.4
Fungicides										
Azoxystrobin	1	1	1.0	1.0	0.13	0.101	0.13	0.101	0.2	0.2

** Area applied to less than 0.5 percent. ** Total applied is less than 50 pounds. Rate is less than .0005 pounds per acre.*

1/ Planted acres in 2004 and 2006 for the 5 major states were 182,400 acres and 190,000 acres respectively. The states included in 2004 and 2006 were MN, NY, OR, WA, and WI.

2/ Insufficient reports to publish data for the following agricultural chemicals: 2004: Herbicides: Dicamba, Dimethenamid-P, Ethalfluralin, Fluroxypyr, Glyphosate diam salt. Insecticides: Acephate, Carbaryl, Cyromazine, Diazinon, Lambda-cyhalothrin, Methoxychlor, Petroleum distillate, Phosmet. Fungicides: Captan, Copper hydroxide, Sulfur. Other Chemicals: Cytokinins. 2006: Herbicides: 2,4-D, triiso. salt, Clethodim, Clopyralid mono salt, Dicamba, sodium salt, Diflufenzopyr-sodium, Imazethapyr, ammon., MCPA, Metolachlor, Nicosulfuron, Paraquat, Simazine, Triallate. Insecticides: Chlorpyrifos, Esfenvalerate, Malathion, Petroleum distillate, Propargite. Fungicides: Fludioxonil. Other Chemicals: Gibberellic acid.

3/ Refers to acres receiving one or more applications of a specific agricultural chemical. Note: Data may not multiply across due to rounding.